Claims

1. A lube base oil other than silicone oil having a kinematic viscosity of 12 mm^2/s or below at 40°C, exhibiting, in Noack test (250°C, 1 hr), an evaporation loss of 30 mass% or below and/or a flash point of 200°C or higher, and exhibiting an aniline point of 60°C or higher.

2. A lube base oil as described in claim 1, which exhibits an aniline point of 80°C or higher.

3. A lube base oil as described in claim 1, which exhibits a flash point of 220°C or higher.

4. A lube base oil as described in claim 1, which has a kinematic viscosity of 10 mm^2/s or below at 40°C.

5. A lube base oil as described in claim 1, which contains an ether compound.

6. A lube base oil as described in claim 5, wherein the ether compound is any of the compounds represented by the following formula, or a mixture thereof:

$$R^1-O-(R^2-O)_a-(R^3-O)_b-(R^4-O)_c-R^5 \quad (1)$$

(wherein R^1 and R^5 each independently represents hydrogen atom, an alkyl group having 1 to 24 carbon atoms, a phenyl group, or an alkylaryl group having 7 to 24 carbon atoms; R^2, R^3, and R^4 each independently represents an alkylene group having 2 to 18 carbon atoms; each of a, b, and c is 0 to 8 (preferably 0 to 5) as an averaged value; the sum of a to c is 0 to 8 (preferably 0 to 5); and the units (R^2-O), (R^3-O), and (R^4-O) may be identical to or different from one

another.)

7. A lube base oil as described in claim 1, which further contains a hydrocarbon compound.

8. A lube base oil as described in claim 7, wherein the hydrocarbon compound is a poly(α-olefin).

9. A lubricating oil composition comprising a lube base oil as recited in any of claims 1 to 8, mixed with at least one additive selected from the group consisting of an antioxidant, a viscosity index improver, a detergent dispersant, a friction reducing agent, a metal inactivator, a pour point depressant, an abrasion resisting agent, a defoamer, and an extreme-pressure additive.